



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-3753; Directorate Identifier 2015-NE-26-AD; Amendment 39-18739; AD 2016-25-13]

RIN 2120-AA64

Airworthiness Directives; Safran Helicopter Engines, S.A. (formerly Turbomeca S.A.) Turboshift Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding airworthiness directive (AD) 2016-04-12, that applies to certain Safran Helicopter Engines, S.A. (formerly Turbomeca S.A.) Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2 turboshaft engines. AD 2016-04-12 required spectrometric oil analysis (SOA) inspection of the engine accessory gearbox (AGB), and, depending on the results, removal of the engine AGB. This AD requires initial and repetitive wear inspections of the engine AGB cover. This AD was prompted by a report of an uncommanded in-flight shutdown (IFSD) of an Arriel 2S2 engine caused by rupture of the 41-tooth gear, which forms part of the bevel gear in the engine AGB. We are issuing this AD to correct the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Safran Helicopter Engines, S.A. 40220 Tarnos, France; phone: 33 0 5 59 74 40 00; fax: 33 0 5 59 74 45 15. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3753.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3753; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the mandatory continuing airworthiness information (MCAI), regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2016-04-12, Amendment 39-18406 (81 FR 12583, March 10, 2016), (“AD 2016-04-12”). AD 2016-04-12 applied to the specified products. The NPRM published in the Federal Register on June 17, 2016 (81 FR 39601). The NPRM proposed to require initial and repetitive spectrometric oil analysis (SOA) of the AGB, and wear inspections of the engine AGB cover. However, this AD only mandates wear inspections of the engine AGB cover and does not add requirements beyond the scope of the NPRM.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (81 FR 39601, June 17, 2016).

Since we issued AD 2016-04-12, the European Aviation Safety Agency (EASA) has issued MCAI European Aviation Safety Agency AD 2016-0055R1, dated October 11, 2016, to only specify that periodic wear inspections of the engine AGB cover are necessary. This AD removes the proposed requirements for initial and repetitive SOA of the AGB, which reduces the costs of compliance in this AD.

Also since we issued AD 2016-04-12, Safran Helicopter Engines, S.A. has issued Mandatory Service Bulletin (MSB) No. 292 72 2861, Version D, dated September 23, 2016. The MSB only requires performing periodic wear inspections of the engine AGB cover.

Conclusion

We reviewed the available data and determined that air safety and the public interest require adopting this AD with the changes described previously. We determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR Part 51

Safran Helicopter Engines, S.A. has issued MSB No. 292 72 2861, Version D, dated September 23, 2016. The MSB describes procedures for performing periodic wear inspections of the engine AGB cover. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 250 engines installed on helicopters of U.S. registry. We also estimate that it will take 1 hour to perform the engine AGB cover wear inspection. The average labor rate is \$85 per hour. Required parts for the wear inspection cost about \$3,100 per engine. We estimate that 5 engines will require AGB replacement at a cost of \$44,397 per engine. We also estimate that it will take about 2 hours to replace the engine AGB. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$1,019,085.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) AD 2016-04-12, Amendment 39-18406 (81 FR 12583, March 10, 2016), and adding the following new AD:

2016-25-13 **Safran Helicopter Engines, S.A. (Type Certificate previously held by Turbomeca S.A.):** Amendment 39-18739; Docket No. FAA-2015-3753; Directorate Identifier 2015-NE-26-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2016-04-12, Amendment 39-18406 (81 FR 12583, March 10, 2016).

(c) Applicability

This AD applies to Safran Helicopter Engines, S.A. Arriel 2B, 2B1, 2C, 2C1, 2C2, 2D, 2E, 2S1, and 2S2 turboshaft engines with an engine accessory gearbox (AGB), part number 0292120650, with a machined front casing.

(d) Unsafe Condition

This AD was prompted by a report of an uncommanded in-flight shutdown (IFSD) of an Arriel 2S2 engine caused by rupture of the 41-tooth gear, which forms part of the bevel gear in the engine AGB. We are issuing this AD to prevent failure of the engine AGB, uncommanded IFSD, damage to the engine, and damage to the helicopter.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Initial Wear Inspection

(i) For all affected engines, perform a wear inspection of the engine AGB cover before the engine AGB, module M01, exceeds 850 engine hours (EH) since new or since last overhaul (SLO), or within 50 EHs after April 14, 2016, or before the next flight after the effective date of this AD, whichever occurs latest.

(ii) Reserved.

(2) Repetitive Wear Inspection Intervals

(i) For Arriel 2E engines, repeat the engine AGB cover wear inspection within every 800 EH since last inspection (SLI).

(ii) For all affected engines, except for Arriel 2E engines, repeat the engine AGB cover wear inspection within every 600 EH SLI.

(3) Inspection Criteria

(i) Use paragraph 2.4.2 of Safran Helicopter Engines, S.A. Mandatory Service Bulletin (MSB) No. 292 72 2861, Version D, dated September 23, 2016, to do the inspections required by paragraphs (e)(1) and (e)(2) of this AD.

(ii) Reserved.

(4) Corrective Actions Based on the Results of the Most Recent Wear Inspection

(i) If the wear measured from the most recent wear inspection is 0.15 mm or less, no further action is required. However, you must still comply with the repetitive inspection requirements of paragraph (e)(2) of this AD.

(ii) If the most recent wear inspection was performed while the engine was in service, and the wear is greater than 0.15 mm, do the following:

(A) If the wear measured from the most recent wear inspection is greater than 0.15 mm, but 0.30 mm or less, remove the engine AGB from service within 200 EH SLI and replace with a part eligible for installation.

(B) If the wear measured from the most recent wear inspection is greater than 0.30 mm, but 0.40 mm or less, remove the engine AGB from service within 25 EH SLI and replace with a part eligible for installation.

(C) If the wear measured from the most recent wear inspection is greater than 0.40 mm, remove the engine AGB from service before further flight and replace with a part eligible for installation.

(iii) If the most recent wear inspection was performed on the engine during an engine shop visit, and the wear is greater than 0.15 mm, remove the engine AGB before further flight and replace with a part eligible for installation.

(f) Credit for Previous Action

If you have previously performed a wear inspection of the engine AGB cover prior to the effective date of this AD in accordance with the instructions given in Turbomeca MSB No. 292 72 2861, Version C, dated March 9, 2016, or Turbomeca MSB No. 292 72 2861, Version B, dated February 2, 2016, then you may take credit for that wear inspection as the “most recent” wear inspection for the purposes of paragraph (e)(4) of this AD.

(g) Definition

For the purpose of this AD, an engine shop visit is defined as the induction of an engine into the shop for maintenance involving the separation of any major mating engine flanges, except that the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(i) Related Information

(1) For more information about this AD, contact Philip Haberlen, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7770; fax: 781-238-7199; email: philip.haberlen@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency AD 2016-0055R1, dated October 11, 2016, for more information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/document?D=FAA-2015-3753-0006>.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Safran Helicopter Engines, S.A. Mandatory Service Bulletin No. 292 72 2861, Version D, dated September 23, 2016.

(ii) Reserved.

(3) For Safran Helicopter Engines, S.A. service information identified in this AD, contact Safran Helicopter Engines, S.A. 40220 Tarnos, France; phone: 33 0 5 59 74 40 00; fax: 33 0 5 59 74 45 15.

(4) You may view this service information at FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

(5) You may view this service information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA,

call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on November 29, 2016.

Colleen M. D'Alessandro,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
[FR Doc. 2016-31695 Filed: 12/29/2016 8:45 am; Publication Date: 12/30/2016]